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EXAMINER

BISSETT, MELANIE D

ART UNIT

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Paper No. 0504

Application Number: 09/444,968  
Filing Date: November 22, 1999  
Appellant(s): VANDEVOORDE ET AL.

Joan McGillicuddy  
For Appellant

EXAMINER'S ANSWER

**MAILED**

MAY 26 2004

**GROUP 1700**

This is in response to the appeal brief filed 17 March 2004.

**(1) Real Party in Interest**

A statement identifying the real party in interest is contained in the brief.

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**(2) Related Appeals and Interferences**

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) Status of Claims**

The statement of the status of the claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves claims 1-5 and 12.

Claims 7-11 and 13-17 are withdrawn from consideration as not directed to the elected invention.

Claim 6 has been allowed.

Note that claim 6 was amended in a response filed 31 August 2001 to form an independent claim. Thus, claim 6 has been allowed.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Invention**

The summary of invention contained in the brief is correct.

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**(6) Issues**

The appellant's statement of the issues in the brief is correct.

**(7) Grouping of Claims**

The rejection of claims 1-5 and 12 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7). Although appellant's brief seems to indicate that the claims are grouped according to the issues, no support or reasons for the separation of claims has been given. Also, the claims of the separate issues overlap in grouping. For these reasons, it is the examiner's position that the rejected claims stand or fall together.

**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

Note, however, that claim 6 (not on appeal) has been amended to form an independent claim. The version supplied in the Appendix is incorrect.

**(9) Prior Art of Record**

5,798,409	HO	8-1998
6,309,707	MAYER et al.	10-2001

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**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-2, 4-5, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Ho.

Ho discloses a composition to be used as a clearcoat (col. 24 lines 26-28) comprising 2-butyl-2-ethyl-1,3-propanediol, an isocyanate, and two polyol compounds (see Table 5). Polyol IV of the composition in example 8 is a carbinol-terminated siloxane having an OH equivalent of 98, and Polyol I of the example is a carboxylic acid-modified polyester diol with an OH equivalent of 72.9 (see Table 1). The propanediol compound fits the applicant's formula of claim 1, where R is n-butyl. Based on the weight of the combined polyols, the propanediol compound comprises ~15% by weight of the composition. The composition also comprises methyl ethyl ketone, a volatile organic solvent. Ho teaches that coating compositions include prepolymers made from carboxyl-functional diols having a hydroxyl equivalent weight of about 60-2000. This results in hydroxyl values of 28-935 mg KOH/g of polyol. Because the reference exemplifies combining carboxyl-modified polyols with an isocyanate and 2-butyl-ethyl-1,3-propanediol to form a coating and because the reference teaches the use of carboxyl-functional diols having hydroxyl values including the applicant's claimed

range, it is the examiner's position that the coatings of Ho's invention anticipate the claimed invention.

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Claims 1-3, 5, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Mayer et al.

Mayer discloses coating compositions for basecoats and clearcoats combining acrylate resins and urethane resins (col. 15 lines 56-67), where the acrylate resin has an OH number of 40-200 mg KOH/g (col. 4 lines 39-45) and the urethane resin is a product of a polyisocyanate and an alcohol such as 2-butyl-2-ethylpropane-1,3-diol (col. 12 lines 18-25; col. 13 lines 29-40; col. 22 lines 5-23). The coatings have VOC values of  $\leq 2.8$  lbs/gal (335.5 g/L) (col. 4 lines 11-17). In the broadest interpretation of the claims, compositions containing reaction products of the claimed components would read on a coating composition comprising the components. Thus, it is the examiner's position that Mayer et al. anticipates the present claims.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ho.

Ho applies as above, failing to exemplify the use of an acrylate polymer with the composition of the invention. The example presented by Ho does not teach the use of an acrylic polymer; however, Ho notes the possible addition of a polyacrylate polyol to the coating composition to improve gloss retention and decrease drying time of the coating (col. 16 lines 18-34). The polyacrylate polyols have hydroxyl equivalent weights of about 200-8000, a range that encompasses the appellant's claimed hydroxyl values.

Therefore, it would have been prima facie obvious to include an acrylate polyol in the exemplified coating composition to improve gloss retention of the coating.

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**(11) Response to Argument**

It is the examiner's position that Ho's final coating composition would read on the present claims, since the composition uses the applicant's claimed components to form the coating. The appellant has not limited the process for forming the coating or the reaction state of the components in the coating composition. The appellant also has not excluded other reactants from the composition. Thus, a coating composition comprising reaction products of a film-forming polymer, a polyisocyanate, and a diol would anticipate a coating composition comprising the components. It is noted that Ho cites the final product of the invention as a coating composition useful for clearcoats.

In response to the appellant's arguments that the claim language cannot be expanded to include any and all possible materials the words might read on, it is the examiner's position that the claims must be interpreted in the broadest sense. A "coating composition" includes all materials used to form a coating, which in this case includes the initial reactants.

Regarding the appellant's arguments that nothing in Ho discloses the coating composition as separate, non-reacted components, it is first noted that the claim does not limit the coating composition to separate, non-reacted components. It is also noted that the appellant's examples suggest coating compositions comprising the reaction products of the claimed components. The short pot lives of the compositions suggest

that reaction begins when the components are first mixed. Thus, the appellant's examples support the interpretation of coating compositions comprising reaction products of the materials.

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Furthermore, in the broadest interpretation of the claim, a "coating composition" would encompass all compositions that have the ability to coat at least a small portion of a substrate. The moment reactants are mixed, the mixture becomes a "coating composition", since this is the intent of the mixture. Additionally, it is not intended to coat substrates with Ho's intermediate composition; however, because the mixtures have the capability to coat a substrate simply by contacting the mixture with a substrate, the intermediates can be considered a "coating composition." Sufficient evidence has not been provided to suggest that such a composition would not coat at least a portion of a substrate. It is noted that the applicant has not defined "coating composition" to exclude low-molecular-weight compositions. Since the compositions of the reference inherently teach compositions capable of coating at least part of a substrate, motivation for using the composition as such is not needed. It is noted that the rejection of claim 1 has been made under 35 USC 102 and not 35 USC 103.

Regarding the appellant's positions that coatings must protect and decorate, the appellant has not provided support from the specification that coating compositions must be limited to such protective and decorative coatings. Further, the appellant has not provided evidence that the uncured dispersions of Ho's invention would not protect and decorate to a certain extent. The examiner maintains her interpretation of coating compositions as compositions capable of coating at least a portion of a substrate.



In response to the appellant's arguments that the polyols of Ho's invention would not equate to the claimed "film-forming polymer" of the claims based on molecular weight, the appellant has not shown that low-molecular-weight polyols are incapable of forming films. Although the appellant relies on knowledge known to a skilled person, no evidence is provided to support such a position.

In response to the appellant's arguments that the unreacted components would have different properties than the reacted product, it is acknowledged that unreacted, separate components would have different properties. However, the claims do not limit the compositions to unreacted components, and the appellant's examples show rapid reaction of the claimed components.

Regarding the appellant's arguments that Ho does not teach the claimed hydroxyl values, it is noted that Ho clearly suggests the use of carboxyl-functional diols having equivalent weights of 60-2000 in the invention (col. 10 lines 23-31). By the appellant's calculations, this results in hydroxyl numbers of 28-935 mg KOH/g of polyol.

In response to the appellant's arguments that Mayer does not disclose the polyol of the formula in claim 1, it is the examiner's position that such a polyol was used to form the coating composition, and as such, the coating composition comprises the polyol.

Regarding the appellant's arguments that none of components (a)-(h) and/or (a)-(g) of part A corresponds to the diol of the formula in claim 1, it is noted that claim 3 limits the film forming polymer and not the specific diol of the formula in claim 1. Ho teaches including polyacrylate polyols to improve gloss retention and reduce drying

Art Unit: 1711

time. Therefore, it has been the examiner's position that it would have been prima facie obvious to include polyacrylate polyols in the coating compositions of Ho to improve gloss retention and reduce drying time. The acrylate polymers are taught to have hydroxyl equivalent weights of 200-8000, resulting in hydroxyl values of 7-280 mg KOH/g polyol.

In response to the appellant's arguments that Ho's compositions do not teach the separate components of claim 1, the examiner notes the arguments above, paragraphs 13-17.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Melanie Bissett  
May 24, 2004

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